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EXAMINER

SPAHN, GAY

ART UNIT PAPER NUMBER

3673

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

HC

Office Action Summary

Application No.

10/674,751

Applicant(s)

FRITZ, TODD D.

Examiner

Gay Ann Spahn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 1-3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-7 is/are rejected.
- 7) ☒ Claim(s) 4-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of the invention of Group II (i.e., claims 4-6 and 7, drawn to a method of securing a single ply membrane roofing system to a roof deck and a method of constructing a single ply membrane roofing system applied to a roof deck, respectively) in the reply filed on 13 May 2005 is acknowledged. The traversal is on the grounds that Applicant alleges the inventions of Group I and Group II can be searched and examined together without serious burden. This is not found persuasive because the burden is in having to search differing classes (i.e., the product made (i.e., single ply roofing system and roof deck in combination, claims 1-3) being classified in class 52, subclass 408 and the process of making (i.e. method of securing a single ply membrane roofing system to a roof deck and a method of constructing a single ply membrane roofing system applied to a roof deck, claims 4-6 and 7, respectively) being classified in claim 156, subclass 71.

The requirement is still deemed proper and is therefore made FINAL.

Claims 1-3 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 13 May 2005.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "16" has been used to designate both "handle" and "wood deck" in Fig. 4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to because in Fig. 3, the lead line leading from reference character "13a" does not extend all the way so that it is touching the "fastener head" which it represents. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must

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be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character not mentioned in the description: "12a" shown in Fig. 2. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the step of "applying an adhesive coating to the underside of said membrane to an extent to cover the adhesive coating applied to said fastening projection and deck" in lines 19-21 of claim 7 must be shown or the feature canceled from the claim. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

(1) page 5, line 2 of paragraph no. [0017] has reference character "S" representing the "roofing system", pages 5-6, lines 1, 4, and 8 of paragraph no. [0019] and pages 7-8, lines 2, 5, 8, and 16 of paragraph no. [0023] has reference character "S" representing a "sheet", and page 7, lines 1 and 11 of paragraph no. [0022] has reference character "S" representing "strip", but the same reference character cannot represent different structures;

(2) page 5, line 1 of paragraph no. [0018], it is suggested that the words --or weld bond-- be inserted after the words "the factory weld" for consistency with the remainder of the specification;

(3) page 5, lines 2-3 of paragraph no. [0018], it is suggested that "the edge 12b" be changed to --the welded edge 12b-- for consistency with line 6 of paragraph no. [0019];

(4) page 5, line 5 of paragraph no. [0018], change "sheets" to --membranes-- for consistency with the last line of paragraph no. [0017];

(5) page 5, line 7, of paragraph no. [0018], it is suggested that --12-- be inserted after the words "weld bond", that "12" be omitted after the word "material", and that --bond 12-- be inserted after the second occurrence of the word "weld";

(6) page 5, line 8, of paragraph no. [0018], change "die electric" to --dielectric--;

(7) page 5, line 5 of paragraph no. [0019], change "sheet" to --membrane--;

(8) page 6, line 4 of paragraph no. [0020], "insulation board sheet 15" should be changed to --insulation board sheet or deck member 15-- so as to make it understandable why you are calling reference numeral "15" a "deck member" in lines 8-9, 12, and 16 of paragraph no. [0021];

(9) page 6, line 4 of paragraph no. [0020] has reference numeral "16" representing a "wood deck", but line 3 of paragraph no. [0021] has reference numeral "16" representing a "handle";

(10) page 6, line 4 of paragraph no. [0021], changed "parting line" to --welded edge--;

(11) page 6, the sixth line of paragraph no. [0021], it is believed that reference numeral "10" should be changed to reference character --10a-- to represent the "fastening projection";

(12) page 6, the seventh line of paragraph no. [0021], it is believed that reference numeral "13" should be changed to reference character --13a-- to represent the "fastener heads";

(13) page 6, line 9 of paragraph no. [0021], before the word "edge" insert --free--;

(14) page 6, line 11 of paragraph no. [0021], change "weld" to --welded--;

(15) page 6, line 12 of paragraph no. [0021], after "portion", insert --of the fastening projection 10a which extends for the predetermined distance--;

(16) page 6, line 15 of paragraph no. [0021], before "edge", insert --free--;

(17) page 7, the second line, change "film 17-17a" to --coating 17--;

(18) page 7, line 3 of paragraph no. [0022], changed "10" to --10a--;

(19) page 8, the seventh line down, before "tabs" insert --fastening--; and

(20) page 8, the tenth line down, change "tab or ledge 10a" to --fastening projection or tab 10a--, and reference numeral "15" should be changed to --14-- to represent the plates as shown in Fig. 4.

Appropriate correction is required.

Claim Objections

Claims 4-7 are objected to because of the following informalities:

(1) claim 4, the recitation of "a single ply membrane roofing system" (line 1), "said system" (line 2), "said membrane system" (line 4), and "said system" (lines 10) is confusing because the same terminology should be used consistently throughout the claim (although the Applicant is allowed to shorten the recitation of an initially introduced long recitation) and therefore, for clarity, the examiner suggests changing "said membrane system" in line 4 to --said system-- or else changing the recitations in lines 2, 4, and 10 to --said membrane roofing system--;

(2) claim 4, the recitation of the first membrane having "a longitudinally extending free edge" (lines 2-3), "said first membrane edge" (lines 5 and 7), "said free edge" (lines 8-9) is confusing because the same terminology should be used consistently throughout the claim and therefore, for clarity, the examiner suggests changing "a longitudinally extending free edge" in lines 2-3 to --a longitudinally extending first member free edge--, "said first membrane edge" in lines 5 and 7 to --said first membrane free edge--, and "said free edge" in lines 8-9 to --said first membrane free edge--;

(3) claim 4, the recitation of “ a second membrane with an edge portion” (lines 4-5) and “the edge of said second membrane” (lines 6-7) is confusing because the same terminology should be used consistently throughout the claim and therefore, for clarity, the examiner suggests changing “a second membrane with an edge portion” in lines 4-5 to --a second membrane with a second membrane free edge-- and “the edge of said second membrane” in lines 6-7 to --said second membrane free edge of said second membrane--;

(4) claim 4, line 12, the recitation of “placing spaced apart fasteners” is confusing because “transversely spaced fasteners” have already been introduced in lines 3-4 and therefore, the examiner suggests changing “placing spaced apart fasteners” in line 12 to --placing said fasteners at transversely spaced positions--;

(5) claim 4, line 12, the word --said-- should be inserted before “fastening projection” because this term has already been introduced as “a fastening projection” in line 8;

(6) claim 4, the recitation of “a roof deck” (line 2), “said roof deck” (line 3), “said roof deck” (line 10), “said deck” (line 12), and “said deck” (line 13) is acceptable, but for clarity and consistency, the examiner suggest change “said deck” in lines 12 and 13 to --said roof deck--;

(7) claim 4, the recitation of “maintaining said second membrane peeled upwardly back from said weld bond” (lines 11-12) and “with said second membrane in said peeled back position” (line 14) is confusing because the same terminology should be used consistently through the claim and therefore, the examiner suggests changing

"maintaining said second membrane peeled upwardly back from said weld bond" in lines 11-12 to --maintaining said second membrane in a peeled back position from said weld bond--;

(8) claim 4, line 15, the recitation of "said fastening edge" lacks antecedent basis and should be changed to --said fastening projection--;

(9) claim 4, lines 16-17, the recitation of "said first membrane projection" lacks antecedent basis and should be changed to --said fastening projection--;

(10) claim 4, line 19, the word --said-- should be inserted before "fasteners" because this term has already been introduced as "spaced apart fasteners" in line 12;

(11) claim 4, line 20, the word --said-- should be inserted before "adhesive coating" because this term has already been introduced as "a continuous adhesive coating" in line 16;

(12) claim 5, line 2, the recitation of "the front edge" lacks antecedent basis and should be changed to --said first membrane free edge--;

(13) claim 5, line 2, "said deck" should be changed to --said roof deck--;

(14) claim 5, line 3, the recitation of "said front edge" lack antecedent basis and should be changed to --said first membrane free edge--;

(15) claim 6, line 2, the recitation of "said front edge" lack antecedent basis and should be changed to --said first membrane free edge--;

(16) claim 6, line 3, "deck" should be changed to --said roof deck--;

(17) claim 7, the recitation of "a single ply membrane roofing system" (line 1), "said system" (line 2), "said membrane system" (line 4), and "said system" (lines 10) is

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confusing because the same terminology should be used consistently throughout the claim (although the Applicant is allowed to shorten the recitation of an initially introduced long recitation) and therefore, for clarity, the examiner suggests changing "said membrane system" in line 4 to --said system-- or else changing the recitations in lines 2, 4, and 10 to --said membrane roofing system--;

(18) claim 7, the recitation of the first membrane having "a longitudinally extending front free edge" (lines 2-3), "said first membrane edge" (lines 5-6 and 7-8), "said free edge" (line 9) is confusing because the same terminology should be used consistently throughout the claim and therefore, for clarity, the examiner suggests changing "a longitudinally extending front free edge" in lines 2-3 to --a longitudinally extending first member free edge--, "said first membrane edge" in lines 5-6 and 7-8 to --said first membrane free edge--, and "said free edge" in line 9 to --said first membrane free edge--;

(19) claim 7, the recitation of "a second membrane with an edge portion" (lines 4-5) and "the rear edge of said second membrane" (line 7) is confusing because the same terminology should be used consistently throughout the claim and therefore, for clarity, the examiner suggests changing "a second membrane with an edge portion" in lines 4-5 to --a second membrane with a second membrane free edge-- and "the rear edge of said second membrane" in lines 6-7 to --said second membrane free edge of said second membrane--;

(20) claim 7, line 11, "said bond" should be changed to --said weld bond--;

(21) claim 7, lines 11-12, the word --said-- should be inserted before "fastening projection" because this term has already been introduced as "a fastening projection" in line 8;

(22) claim 7, line 12, the recitation of "placing transversely spaced apart fasteners" is confusing because "transversely spaced fasteners" have already been introduced in line 4 and therefore, the examiner suggests changing "placing transversely spaced apart fasteners" in line 12 to --placing said fasteners at transversely spaced positions--;

(23) claim 7, the recitation of "a roof deck" (line 2), "said roof deck" (line 3), "said roof deck" (line 10), "said deck" (line 12), "said deck" (line 13), "said roof deck" (line 16), "said deck" (line 18), "deck" (line 21), and "deck portion" (line 23) is confusing because the same terminology should be used consistently throughout the claim and therefore, for clarity and consistency, the examiner suggest changing "said deck" in lines 12, 13, and 18 to --said roof deck--, "deck" in line 21 to --said deck--, and "deck portion" in line 23 to --said roof deck--;

(24) claim 7, the recitation of "maintaining said second membrane peeled upwardly back" (lines 10-11) and "with said second membrane in peeled back position" (line 14) is confusing because the same terminology should be used consistently through the claim and therefore, the examiner suggests changing "maintaining said second membrane peeled upwardly back" in lines 10-11 to --maintaining said second membrane in a peeled back position-- and "with said second membrane in peeled back position" in line 14 to --with said second membrane in said peeled back position--;

(25) claim 7, line 15, the recitation of "said fastening edge" lacks antecedent basis and should be changed to --said fastening projection--;

(26) claim 7, line 15, the word --said-- should be inserted before "fasteners" because this term has already been introduced as "transversely spaced fasteners" in line 4;

(27) claim 7, line 16, "said bond" should be changed to --said weld bond--;

(28) claim 7, line 17, for clarity, it is suggested that "a continuous adhesive coating" be changed to --a continuous first adhesive coating--;

(29) claim 7, lines 17-18, the recitation of "said first membrane projection" lacks antecedent basis and should be changed to --said fastening projection--;

(30) claim 7, line 19, the recitation of "an adhesive coating" is confusing and should be changed to --a second adhesive coating--;

(31) claim 7, line 20, the recitation of "said membrane" is confusing because it is not clear if it is the first membrane or the second membrane and therefore, the examiner suggest changing "said membrane" in line 20 to --said second membrane--;

(32) claim 7, line 20, the recitation of "the adhesive coating" is confusing and the examiner suggests changing "the adhesive coating" in line 20 to --said first adhesive coating--;

(33) claim 7, line 21, for clarity, the examiner suggests inserting --, said fasteners,-- after "said fastening projection"; and

(34) claim 7, line 23, for clarity, the examiner suggests changing "said coating" to --said first adhesive coating--; and

(35) claim 7, line 23, the examiner suggests inserting the word --said-- before the word "fasteners" for proper antecedent basis.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hulsey (U.S. Patent No. 6,250,034) in view of Barksdale et al. (U.S. Patent Application Publication No. 2004/0002414).

As to claim 4, Hulsey discloses a method of securing a single ply membrane (see 50 in Figs. 3 and 4) roofing system to a roof deck; said system comprising a first membrane (62) with a longitudinally extending free edge to be secured to said roof deck by transversely spaced fasteners (68), said membrane system (50) having a second membrane (54) with an edge portion overlapping said first membrane (62) edge and bonded to said first membrane (62) via a continuous weld bond (60, 70) along the edge of said second membrane (54) such that said first membrane (62) edge projects forwardly from said weld bond (60, 70) to define a fastening projection (under 10) extending forwardly from said free edge under said second membrane (54), comprising:

a. with said system applied to said roof deck and maintaining said second membrane peeled upwardly back from said weld bond and fastening projection, placing spaced apart fasteners (68) into said deck (insulation board 66 and roof deck below 66) to secure said fastening projection of said first membrane (62) to said deck.

However, Hulsey fails to explicitly disclose the steps of:

b. with said second membrane in said peeled back position applying a liquid adhesive over said fastening edge and fasteners from said weld bond forwardly to provide a continuous adhesive coating on said first membrane projection and over said fasteners; and

c. lowering said second membrane to cover and adhere to said fastening projection and fasteners and provide a substantially continuous monolithic bond comprised of said weld bond and adhesive coating.

Barksdale et al. discloses a method for applying a single ply membrane roofing system to a roof deck which includes the steps of:

b. with said second membrane (52B) in said peeled back position (see Fig. 4 and page 2, paragraph no. [0027], lines 3-4), applying a liquid adhesive (64; see page 1, paragraph no. [0003], line 13, wherein it states "adhesive, in the form of a liquid or tape") onto the back of the second membrane (52B) so that when said second membrane (52B) is folded back over said fastening edge and fasteners, the adhesive coating is applied to said fastening edge and fasteners from said weld bond forwardly to provide a continuous adhesive coating on said first membrane projection and over said fasteners; and

c. lowering said second membrane (52B) to cover and adhere to said fastening projection (59, 60) and fasteners (54, 55) and provide a substantially continuous monolithic bond comprised of said weld bond and adhesive coating (see Fig. 5).

While Barksdale et al. do not explicitly disclose that a liquid adhesive is applied directly over both the fastening projection and the fasteners from said weld bond forwardly, Barksdale et al. do disclose adhesive strips (61, 62) applied on a portion of the fastening projection. Further, Barksdale et al. also discloses applying a layer of liquid adhesive on the bottom of the folded over or peeled back membrane so that when the membrane is placed over both the fastening projection and the fasteners, the liquid adhesive on the back side of the membrane will form an adhesive coating layer over both the fastening projection and the fasteners in order to provide a continuous adhesive coating on said first membrane projection and over said fasteners and thus, the effect will be the same as if a layer of the liquid adhesive were applied directly onto both the fastening projection and the fasteners.

It is well settled that a mere reversal of parts where the results are the same is an obvious expedient (see *In re Gazda*, 219 F.2d 449, 104 USPQ 400 (CCPA 1955), wherein "[p]rior art disclosed a clock fixed to a stationary steering wheel column of an automobile while the gear for winding the clock moves with steering wheel; mere reversal of such movement, so the clock moves with wheel, was held to be an obvious expedient.).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of securing a single ply membrane

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roofing system to a roof deck of Hulsey by including the adhesive application and bonding steps as taught by Barksdale et al. and the obvious expedient of applying the adhesive over the fastening projection and fasteners instead of the backside of the membrane in order to provide better gripping of the membrane against uplift forces.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hulsey (U.S. Patent No. 6,250,034) in view of Barksdale et al. (U.S. Patent Application Publication No. 2004/0002414), as applied to claim 4 above, and further in view of any one of Van Note (U.S. Patent No. 4,424,650) or Carr, III et al. (U.S. Patent No. 6,502,360) or Chiu (U.S. Patent No. 4,855, 172).

As to claim 5, Hulsey in view of Barksdale discloses the method of claim 4 as discussed above, but Hulsey in view of Barksdale fails to explicitly disclose that said adhesive coating flexibly extends down the front edge of said first membrane to the level of said deck between the said front edge of said first membrane and the underside of said second membrane.

Van Note discloses a membrane roofing system and method wherein the adhesive coating (74, 72) flexibly extends down the front edge of said first membrane (38) to the level of said deck between the said front edge of said first membrane (38) and the underside of said second membrane (above 74).

The examiner notes that although Van Note discloses liquid roof sealant (74) and bead of silicon sealant (72), these substances would constitute an adhesive in that once

set they would adhere the second membrane over the first membrane (38) to the roof deck.

Carr, III et al. disclose a membrane roofing system and method (see either Fig. 1 or Fig. 2) wherein the adhesive coating (18 or 38) flexibly extends down the front edge of said first membrane (base sheet 14 or sheet under 38) to the level of said deck (12 or 32, 34, 36) between the said front edge of said first membrane and the underside of said second membrane.

The examiner notes that although Carr, III et al. discloses molten asphalt (18 or 38), this would constitute a liquid adhesive (see col. 2, lines 8-27) in that once set it would adhere the second membrane over the first membrane to the roof deck.

Chiu discloses a membrane roofing system and method wherein the adhesive coating (22) flexibly extends down the front edge of said first membrane (18) to the level of said deck between the said front edge of said first membrane (18) and the underside of said second membrane (23).

The examiner notes that if Chiu were applied to the system of Hulsey, it would teach to place an adhesive coating (Chiu's 22) over Hulsey's (see Fig. 4) fastening projection of membrane 62 under 10 and over the free edge of membrane 62 to the deck level (insulating board 66 and unnumbered corrugated deck beneath).

It would have been obvious to one of ordinary skill in the art at the time the invention was made of modify the method of securing a single ply membrane roofing system to a roof deck of Hulsey in view of Barksdale et al. by including the step of extending the adhesive coating past the first membrane free edge as taught by any one

of Van Note, Carr, III et al. or Chiu in order to provide a wider area or swatch of bonding as a barrier to moisture.

As to claim 6, Hulsey in view of Barksdale and Chiu discloses the method of claim 5 as discussed above, and Hulsey in view of Barksdale and any one of Van Note, Carr, III et al. or Chiu also discloses that said adhesive coating (74, 72 in Van Note; 18 in Carr, III et al.; or 22 in Chiu) extends forwardly of said front edge of said first membrane for a short distance between said second membrane and roof deck.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gerhardt et al. (U.S. Patent No. 5,171,116) in view of Barksdale et al. (U.S. Patent Application Publication No. 2004/0002414).

As to claim 7, Gerhardt et al. disclose a method of constructing a single ply membrane roofing system applied to a roof deck (see Fig. 2); said system comprising a first membrane (unnumbered, but membrane under 4 and connected to second membrane 3, 3a) with a longitudinally extending front free edge to be secured to said roof deck (1) by transversely spaced fasteners (7), said membrane system having a second membrane (3, 3a) with an edge portion rearwardly overlapping said first membrane edge and hot air or dielectric bonded (see col. 2, lines 50-55, wherein it states that the membrane (3) is "hot gas welded or solvent welded" to the other first membrane) to said first membrane via a continuous weld bond (at 3) along the rear edge of said second membrane (3) such that said first membrane edge projects

forwardly from said weld bond (at 3) to define a fastening projection (under 4) extending forwardly from said free edge, comprising:

a. with said system applied to said roof deck (1), maintaining said second membrane peeled upwardly back from said bond and fastening projection (under 4) and placing transversely spaced apart fasteners (5) into said deck (1) to secure said fastening projection (under 4) of said first membrane to said deck (1).

Gerhardt et al. fail to explicitly disclose the steps of:

b. with said second membrane in peeled back position applying a fast drying liquid adhesive over said fastening edge and fasteners from said bond forwardly and onto only a portion of said roof deck forwardly of said first membrane to provide a continuous adhesive coating on said first membrane projection, said fasteners, and a portion of said deck forwardly adjacent to said fastening projection, while also applying an adhesive coating to the underside of said membrane to an extent to cover the adhesive coating applied to said fastening projection and deck; and

c. lowering said second membrane to cover and adhere to said coating on said fastening projection, fasteners, and deck portion.

Barksdale et al. disclose a method for applying single ply roofing membranes to roof decks which includes the steps of:

b. with said second membrane (52B) in peeled back position (see Fig. 4), applying a fast drying liquid adhesive (64 - see page 1, lines 12-15 of paragraph no. [0003] and page 2, lines 4-13; the examiner notes with respect to the recitation that the liquid adhesive is "fast drying", that "fast drying" is a relative term and as broadly recited,

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the liquid adhesive of Barksale et al. is deemed to meet this recitation since Applicant has not shown any criticality) onto the back of the second membrane (52B) and applying pressure-sensitive adhesive strips (61, 62) over a portion of the fastening projection so that when said second membrane (52B) is folded back over said fastening projection and the fasteners, the adhesive coating on the back side of the second membrane is applied to the adhesive on the fastening projection and to the fasteners from said weld bond forwardly to provide a continuous adhesive coating on said first membrane projection and over said fasteners.

c. lowering said second membrane (52B) to cover and adhere to said coating on said fastening projection, fasteners, and deck portion (see Fig. 5).

While Barksdale et al. do not explicitly disclose that a liquid adhesive is applied “over the fastening edge and fasteners from said bond forwardly and onto only a portion of said roof deck forwardly of said first membrane to provide a continuous adhesive coating on said first membrane projection, said fasteners, and a portion of said deck forwardly adjacent to said fastening projection, while also applying an adhesive coating to the underside of said membrane to an extent to cover the adhesive coating applied to said fastening projection and deck”, Barksdale et al. do disclose adhesive strips (61, 62) applied on a portion of the fastening projection. Further, Barksdale et al. also discloses applying a layer of liquid adhesive on the bottom of the folded over or peeled back membrane so that when the membrane is placed over both the fastening projection and the fasteners, the liquid adhesive on the back side of the membrane will adhere to the adhesive strips and form an adhesive coating layer over both the fastening projection

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and the fasteners in order to provide a continuous adhesive coating on said first membrane projection and over said fasteners and thus, the effect will be the same as if a layer of the liquid adhesive were applied directly onto both the fastening projection and the fasteners.

It is well settled that a mere duplication of parts where the results are the same and no unexpected results are produced is an obvious expedient (see *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960), (Claims at issue were directed to a water-tight masonry structure wherein a water seal of flexible material fills the joints which form between adjacent pours of concrete. The claimed water seal has a "web" which lies ** in the joint, and a plurality of "ribs" ** >projecting outwardly from each side of the web into one of the adjacent concrete slabs. <The prior art disclosed a flexible water stop for preventing passage of water between masses of concrete in the shape of a plus sign (+). Although the reference did not disclose a plurality of ribs, the court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced.).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of securing a single ply membrane roofing system to a roof deck of Gerhardt et al. by including the adhesive coating application and bonding steps as taught by Barksdale et al. and the obvious expedient of duplicating the adhesive coating application step over the fastening projection and fasteners in addition to the step of applying an adhesive coating to the backside of the membrane in order to provide better gripping of the membrane against uplift forces.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 6,764,260 to Nebesnak et al. discloses a plastic/metal composite batten bar and method of using same for securing a thermoplastic roof membrane to a roof deck (see Fig. 6). U.S. Patent No. 4,671,036 to Sullivan discloses a sheet roofing system (see Fig. 4). U.S. Patent Nos. 5,930,969 and 6,427,412 to Mayle et al. disclose a roof membrane attachment system (see Fig. 1). U.S. Patent No. 4,787,188 to Murphy discloses a stress plate and method of using same for securing a roof membrane to a roof deck (see Fig. 4). U.S. Patent No. 5,803,693 to Choiniere et al. discloses a swiveling roofing washer (see Fig. 3). U.S. Patent No. 6,689,449 to Hasan et al. discloses a roof decking membrane welding system and method (see Prior Art Fig. 2 and Figs. 5-6). U.S. Patent No. 5,797,232 to Larson discloses a gripping plate for attaching roofing membrane (see Fig. 1). U.S. Patent No. 6,233,889 to Hulsey discloses a ventilated roof membrane plate and method of installing membrane roof utilizing same (see adhesive tape strip (18) in Fig. 1). U.S. Patent No. 4,885,887 to Simmons et al. discloses an apparatus and method for securing an outer roofing membrane to an insulated roof deck (see adhesive (34) in Fig. 1). U.S. Patent No. 5,800,891 to Wasitis discloses a bonding pad for non-penetrating roof membrane fastening system (see Figs. 1 and 3). U.S. Patent No. 4,726,164 to Reinwall et al. discloses a fastener assembly for a roof membrane (see Fig. 1 and 6). U.S. Patent Nos. 6,238,502 and 6,004,645 to Hubbard disclose a single-ply membrane

roofing system. U.S. Patent No. 4,860,514 to Kelly discloses a single ply roof membrane securing system and method of making and using same. U.S. Patent Application Publication Nos. 2004/0187420 and 2004/0187422 to Bernardi disclose a substrate with membrane seam plates fixed thereon for precise placement of seem plates on roof decking assemblies. U.S. Patent No. 6,640,511 to Link discloses anchor plates (see Figs. 16 and 19). U.S. Patent No. 4,546,589 to Seaman discloses a single-ply sealed membrane roofing system. U.S. Patent Application Publication No. 2002/0095898 to Bettencourt discloses a modular-tarp building-roof/wall shielding and system. U.S. Patent No. 4,747,241 to Whitman discloses a device for facilitating installation of rubber roof sheets (see adhesive 120A in Figs. 1, 4, and 5). U.S. Patent No. 5,772,816 to Hubbard discloses a reinforced tape strip for perimeter securement of a membrane roof and method for attaching. U.S. Patent No. 6,055,786 to Hubbard et al. discloses a heat weld indicator for thermoplastic roofing membrane. U.S. Patent No. 6,021,616 to Mayle discloses a roofing membrane with external tabs. U.S. Patent No. 5,204,148 to Alexander et al. discloses a laminate cover and method for sealing a roofing membrane. U.S. Patent No. 4,977,720 to Kuipers discloses a surface welded thermoplastic roofing system. U.S. Patent Application Publication No. 2004/0238097 to Swann discloses a roofing component adhering assembly and method. U.S. Patent No. 6,769,215 to Carkner discloses a system and method for enhancing the bond of roofing membrane to lightweight insulating concrete. U.S. Patent No. 5,829,214 to Hart discloses methods of sealing roof drain pipes in single ply synthetic plastic roof cover systems and roof cover systems employing such drain pipe sealing assemblies. U.S.

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Patent No. 5,165,210 to Partyka et al. discloses a method of forming a roof seal. U.S. Patent No. 6,742,313 to Ritland et al. discloses a non-cellular adhesive for composite roof structure. U.S. Patent No. 5,737,897 to Naipawer, III discloses an insulation board composite. U.S. Patent No. 4,996,803 to Karrfalt et al. discloses roofing systems and insulation attachment method. U.S. Patent No. 6,537,402 to Pate et al. discloses a membrane welding apparatus including a visual seam marker. U.S. Patent No. 4,707,961 to Nunley et al. discloses a composite roof/roof deck assembly with polymeric membrane. U.S. Patent No. 4,450,663 to Watkins discloses an insulative roof structure. U.S. Patent No. 4,441,295 to Kelly discloses a grid system adhering technique and method of practicing same. U.S. Patent No. 6,378,259 to Carlson discloses roofing felt with adhesive on front and rear faces. U.S. Patent No. 2,176,344 to Hunt discloses a roofing clip. U.S. Patent No. 3,505,770 to Bennett discloses building construction. U.S. Patent No. 4,493,175 to Coppola, Jr. discloses a roofing system. U.S. Patent No. 5,018,329 to Hasan et al. discloses an attachment of roofing washer with heat-sealed screw-washer assemblage. U.S. Patent No. 5,031,374 to Batch et al. discloses a multiple panel metal roofing system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gay Ann Spahn whose telephone number is (571)-272-7731. The examiner can normally be reached on Monday through Thursday, 8:30 am to 7:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather C. Shackelford can be reached on (571)-272-7049. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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September 3, 2005



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